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JPRS L/8822

17 December 1979

# Japan Report

(FOUO 35/79)

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## JAPAN REPORT

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POLITICAL AND SOCIOLOGICAL

JCP CHAIRMAN GIVES OPENING ADDRESS AT PARTY PLENARY SESSION

OW201033 Tokyo JPS in English 0904 GMT 20 Nov 79 OW

[Text] Tokyo, 20 Nov JPS--Presidium Chairman Kenji Miyamoto gave the opening address at the 10th Plenum of the Central Committee of the Japanese Communist Party, on the first day of the plenum which opened on November 19 at party headquarters in Tokyo.

He said that the 10th Central Committee Plenum has two tasks, that is, to discuss and decide on the agenda to be present to the 15th party congress, and to promote the "months" [as received] to be tackled before the congress.

The previous 14th congress fully analyzed the retreat of the party in the two national elections, and laid keystone and created conditions for the new advance and victory of the party. Confident in the general course of the party, and with dauntless courage, the party struggled in the simultaneous local elections and the general election, and was able to reach the highest peak in party history. The forthcoming 15th congress carries two tasks, that is, standing on these achievements but not contented with them, to promote further advance of the party toward fulfillment of the historic mission of the party, and especially to make clear perspectives for a progressive change in politics in conformity with the original three goals of progress, and for victory for the progressive forces in the 1980's, and to elaborate the course of the construction of a big and strong Japanese Communist Party, the motive force of the formation of a progressive united front.

[[JPS] Editor's note: Three goals of progress are, (1) to break off with the Japan-U.S. military alliance and to realize a Japan of neutrality, (2) to break through politics serving interests of big capital and to carry out politics to defend the people's life and living, and (3) to oppose the full revival and strengthening of militarism, and to realize democratic management of the Diet and defend democracy.]

The draft resolution, to be presented to the entire party for discussion, will make scientific analysis of the situation in and abroad, based on the

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summing up of the domestic and international situation and especially on the role of respective political forces revealed particularly through the recent confusion among the Liberal Democratic Party, and will also raise tasks of struggles in respective fields, a proper way of being of a national center of the trade union movement and a policy of the party to cope with it, and the course of development of the party both in quality and quantity. In order to open a way toward social progress and a change, which is suitable to the historical conditions of Japan, in line with the general course of the party program, the most important key lies on the strengthening of the Japanese Communist Party as a mass vanguard party.

To build up a party which is able to win a victory over the right-leaning opposition parties in the fields of both daily activities and elections, it is especially important at present to achieve the goals set out for the "months" and to climb a new summit, the JCP Presidium chairman stressed.

He explained the political nature of the intra-party strife among the Liberal Democratic Party, which had lasted for 40 days since the general election, and the characteristics of the 2d Ohira Cabinet.

The recent disorder inside the LDP has revealed that the party cannot escape from historical decline and that the recent confusion itself was nothing but one scene of the process, he asserted.

Miyamoto emphasized what Prime Minister Ohira said that he would take the responsibility of defeat in the general election by implementing public pledges, is an expression of his determination to meet expectations of the Japanese financial circles and the U.S. by carrying through conservative and reactionary policy, and to revive LDP politics. He pointed out that Justice Minister Kuraishi's remarks aimed at defending the accused of Lockheed pay-off scandal and the rise of question that State Minister Keizo Obuchi was in collusion with KDD irregularities has revealed that the Ohira Cabinet itself should be the first target of enforcement of regulation.

Pointing out that important posts of the cabinet was taken by a Tanaka group, and that the Tanaka group was intended to crush the advance of the progressive forces, he definitely said that the second Ohira Cabinet is an "old" cabinet in its essence.

Miyamoto said references of scientific socialism point out that the roles and basic character of respective parties will come clearer under political confusion and political crisis, and that these points will become conspicuous particularly under the disarray of the LDP. He stressed what the New Liberal Club, the Democratic Socialist Party, and the Komei Party clearly showed their intention to ally themselves with the part of the LDP, if the LDP was split, provided again the true picture of their identity, as new government parties.

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Referring to the consideration of the talks between the leaders of the Komei and Democratic Socialist parties and the inauguration of their consultative committee on a future centrist government, Miyamoto pointed out that these parties were essentially taking the same line as the Liberal Democratic Party. He said that it would obviously lead to a more naked and dangerous reactionary government than the LDP government, a government that would add to the LDP line the policy of repression of the democratic rights of the trade union from the position of the DSP and the Japanese Confederation of Labor (Domei).

Referring to the recent tendency of the Socialist Party, he said "unhappy enough, the Socialist Party has clearly lost the progressive orientation."

It may be possible for the Socialist Party to change its attitude toward the Japan-U.S. military alliance, he said, but the socialists are calling for a change in the Japan-U.S. relations by maintaining the San Francisco system, which is the ground for allowing the U.S. to set up the military bases in Japan, as well as the Japan-U.S. security treaty. This means that they will endorse the present reality as it is, Miyamoto added.

The JCP Presidium chairman also spoke about the absurd approach to the Komei Party of the leadership of the General Council of Trade Unions (Sohyo).

He took up the recent remarks by Sohyo President Motofumi Makieda, who had said that "the Communist Party can be excluded in order to make a success of the consultation between the Socialist and Komei parties on the government problem." This shows, he said, a very inconsistent and unprincipled attitude, surprising many trade union leaders, and is most explicit expression of the fallacy of imposing support for a particular party on the union members. He stressed that the Makieda remarks, which called for a mobilization of trade unions as a detachment of the Komei Party which is clearly an anti-progressive force, are an extreme manifestation of the weakness in the Japanese trade union movement.

In this regard, he recalled what he had pointed out at the 4th Central Committee Plenum of the 8th party congress in 1962. At that time he said "In view of the great goal are [as received] principle of the unification of the labor front, so long as Sohyo maintains the basic policy of forcing the union members to support for a particular political party, viz, the Socialist Party, we cannot appreciate Sohyo as the parent body of a united labor front just because it is a relatively large trade union organization." He said that the current situation corroborated what he had pointed out and predicted almost twenty years before. The sectarian and partisan methods of Sohyo and Domei constitute the most serious weakness of the Japanese Trade Union Movement, which hampers the class-based democratic development of the movement.

Miyamoto said that the strategy of the Komei Party is to bring the Socialist Party into a great coalition of the LDP, Komei and the DSP. Although the

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Socialist Party has not yet announced that it will recognize such a great coalition, it is clear from the logic of class struggle that the Komei Party is urging the Socialist Party to go toward such a direction.

"We cannot say that there is no possibility that the Socialist Party will fall decisively to anti-progressive roads. We never hope that the Socialist Party will go along this road, but we have to apprehend that the JSP has such possibility, Miyamoto said. If the Japan Socialist Party falls to this road, it is quite clear that supporters of the Socialist Party, who want the JSP a "progressive party," will decisively depart from the JSP, as was evidenced in the severe setback of the JSP in the general election after the Katayama Cabinet, coalition of JSP-conservative, Miyamoto stressed.

If the Communist Party has from 80 to 90 seats in the House of Representatives, almost equal to the number of Socialists seats, or at least outnumbering the Komei Party, the general situation will make a certain change, Miyamoto said. Miyamoto stressed the significance that the key issue of the establishment of a progressive united front is to occupy strong stance of the Japanese Communist Party in the national politics.

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POLITICAL AND SOCIOLOGICAL

JCP ISSUES COMMUNIQUE ON 10TH PLENUM

OW211021 Tokyo JPS in English 0927 GMT 21 Nov 79 OW

[Text] Tokyo, 21 Nov JPS--The secretariat of the Japanese Communist Party on November 20 issued a communique on the 10th Central Committee Plenum of the party. The full text follows:

The 10th Central Committee Plenum of the JCP was held on November 19 and 20 at party headquarters.

Presided over by Central Committee Chairman Sanzo Nosaka, the plenum opened, and Presidium Chairman Kenji Miyamoto gave an opening speech on behalf of the presidium.

In the plenum, representing the presidium, secretariat chief Tetsuzo Fuwa made an explanation on the submitted draft resolution of the 15th congress. Representing the presidium, standing presidium member Harumatsu Ebisudani explained the draft of partial amendment to the party constitution.

In the plenum, the standing presidium member Tadato Miyamoto reported on the promotion of "months for the implementation of public pledges, propagation of party policies and expansion of party strength." Standing presidium member Kichiro Akeda reported on activities in preparation for the House of Councillors election.

The plenum discussed these agenda items earnestly. In discussion, the following problems were taken up: The people's expectation to the JCP after the general election; the confusion in the Liberal Democratic Party caused by the political crisis, and the characteristics of moves of the right-leaning opposition parties and the Socialist Party, and the role of the Japanese Communist Party; the importance of struggle being fought with ambition to make the 1980's an era of victory for a progressive united front, the moves in the labor front toward right-leaning reorganization of the labor front and the way of being of a national center of workers movement; speech meetings in nationwide and winning results in the expansion of party strength; the importance in overcoming passive attitude newly appearing among

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party members--contented with the big advance of the JCP in the general election and not taking a new step forward--, especially the task of hastening the tempo in the expansion of party strength; the task of getting all party members' participation in activities; education of new party members; aid to the Democratic Youth League in its months for expansion of members and expansion of JCP members in the league; new significance in setting the goal of votes to be garnered in the House of Councillors election and activities of the supporters' association; on the anti-communist attacks following the general election and on the continuation of and pushing ahead with the dissemination of clean-up pamphlets to defeat the attacks, and dissemination of magazines including WOMEN'S PLAZA.

Presidium Chairman Kenji Miyamoto also took part in the discussion.

After the discussion, Secretariat Chief Tetsuzo Fuwa gave concluding remarks on the opinions expressed on the draft resolution of the congress, and standing presidium member Tadato Miyamoto gave concluding remarks on the promotion of the "months" and the preparation for the House of Councillors election.

The plenum put the draft resolution of the 15th party congress and the draft partial amendments to the party constitution to vote, and approved them unanimously. The two drafts are immediately submitted to discussion by the entire party and will be proposed to the 15th party congress, to be held from January 15 next year.

The plenum decided on the items for selection of delegates to the 15th congress, in conformity with article 25 of the party constitution.

The plenum unanimously approved the opening speech given by Presidium Chairman Kenji Miyamoto, and the reports and concluding remarks on the promotion of the "months" and the preparation for the House of Councillors election. In order to hold a successful 15th congress which will be a historic congress to make the 1980's an era of victory for the progressive united front, the plenum is determined to achieve the tasks of the "months" without fail. Then the plenum closed.

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'ASAHI' ON OHIRA'S CHOICES FOR TOP LDP POSTS

OW210647 Tokyo ASAHI EVENING NEWS in English 20 Nov 79 p 5 OW

[ASAHI SHIMBUN 18 November editorial: "Ohira Administration"]

[Text] As a result of the selection of the top three officials of the Liberal-Democratic Party, the line-up of the new Ohira administration has been completed.

When his new cabinet was formed, Prime Minister Masayoshi Ohira promised the people he would discipline officials, establish political morality and bring about administrative and financial reforms. But will he be able to carry out the necessary political reforms and execute the policies with the people he has chosen to work with? But even more important, is Ohira really determined to act? Many people are skeptical of the new administration.

The influence of the Kakuei Tanaka faction is very obvious in many of the appointments. Zenko Suzuki, who is close to former Prime Minister Tanaka, was appointed chairman of the LDP executive board, which is the third most powerful organization in the party after the party convention and general meeting of Diet members. In the cabinet also, out of 20 posts, the Tanaka faction won four important posts, including the posts of finance minister, who is responsible for finances, taxes and tariffs, home affairs minister and chairman of the National Safety Commission.

Ten out of 25 parliamentary vice-ministers are Diet members from the Tanaka faction. Tanaka faction leaders now chair the lower house steering committee, which is a pivot for Diet operations, and the budget committee. Also it must not be overlooked that a Dietman close to the Tanaka faction and a member of the Tanaka faction head the special committees on aircraft imports of both houses. These committees are responsible for investigating political scandals.

What does all this mean? It is true that the Tanaka faction is still so powerful within the LDP that the Ohira government needed its support to stay

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in office. Some may contend that it was inevitable that this faction should occupy important administrative posts. But if the leading roles in administering government are left up to men who recognize Tanaka, now being tried in the Lockheed payoff scandal, as their leader, will it be possible for Ohira to conduct the thorough "housecleaning" he promised?

For instance, Masaharu Gotoda, who was appointed the chairman of the National Safety Commission, has always been criticized for his free use of money to will political power. Tadao Kuraishi, who became the new justice minister, astonished everyone when he said immediately after assuming office that he hoped Tanaka would be cleared of the charges in the Lockheed case. We feel that the true intentions of this cabinet are now being betrayed both in connection with the series of scandals which began with the Lockheed case and in connection with political and administrative corruption.

It has already been revealed that a new cabinet member, Director-General Keizo Obuchi of the prime minister's office who belongs to the Tanaka faction, had gotten 2 million yen worth of tickets to one of his fund-raising parties purchased by the Kokusai Denshin Denwa Co., which is involved in a series of scandals. Many of the men making up the new Ohira administration are responsible for some of the problems plaguing the government.

- As a result of Ohira's greed for political power and repercussions from the fighting within the LDP, there were neither a policy speech by the prime minister nor questions by the opposition parties in the special Diet which closed on 16 November. We must also point out at this time that Ohira thus failed to meet even his minimum obligations to the nation.

- The Diet deliberations to make up for the political lapse ever since the dissolution of the lower house have been put off to the extraordinary Diet starting on 26 November and to the regular Diet session which follows. If the name, "Society To Better the LDP," is not just a mere slogan, the non-mainstream factions within the LDP should continue to use their position as insiders to blow a whistle on the administration over how it implements policies and political goals.

- Only if the non-mainstream factions use their influence to force the administration to carry out some of the promises it made will they be living up to their responsibility to the people and some good might come from the fighting within the LDP. Covering up the matter with the label "unified party, harmonious system" is merely deceiving the people.

- Both the mainstream and non-mainstream factions of the LDP under the new Ohira administration must realize that each and every one of their actions is being carefully watched by the people.

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'YOMIURI' COLUMNIST ON ONGOING LDP FACTIONAL STRIFE

OW261221 Tokyo THE DAILY YOMIURI in English 23 Nov 79 p 3 OW

["Political Beat" column by Raisuke Honda: "Ohira Troubles Not Over"]

[Text] Prime Minister Ohira, who concurrently is president of the Liberal-Democratic Party (LDP), narrowly managed to form a cabinet and appoint new party executives but must still contend with LDP dissidents over party affairs.

His party's nonleadership factions have demanded strongly that an overall review be made of the LDP presidential election system. They argue that a tentative freeze should be placed on holding of party primaries in the next presidential race late next year.

The anti-Ohira factions had "three conditions" for accepting reluctantly the nominations by Ohira of the three new LDP executives.

One of the most important conditions is the demand for reexamining the party presidential election system.

The faction led by Ohira's strongest rival Takeo Fukuda is particularly adamant on this issue, demanding that the forthcoming LDP presidential election primaries be "frozen."

According to Fukuda and his faction members, the primaries, if held as scheduled in November next year, would be preceded by scrambling among rival factions for supporters at a time when the LDP must solidify party unity to secure victory in the House of Councilors election next summer.

The intraparty disarray resulting from factional vote-getting campaigns for the primaries would lead to another LDP setback in the Upper House election possibly allowing the opposition to reverse the power balance in the house, Fukuda says.

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Liberal-Democrats seeking reelection in the Upper House election, held every three years for a six-year term, will number 59, while the seats of 66 other LDP members of the house are not at stake.

This means that the LDP will have to secure at least 61 seats in the coming election to maintain a majority in the 252-seat Upper House.

No optimism is warranted for the LDP in the election since the factional enmity during the 40-day power struggle following the October 7 general election is still smoldering, while the popularity of the LDP has declined sharply as shown by the latest opinion polls.

Under the circumstances, it would seem that the demand by the anti-Ohira factions for a review of the party presidential election and a freeze on the primaries makes sense.

Former Premier Fukuda, who suffered an "entirely unexpected" defeat at the hands of Ohira in the last presidential primaries, appears to have especially strong wishes to block the forthcoming primaries.

For Premier Ohira and also the leadership of Ohira and Tanaka factions as a whole, the demand for a freeze on the coming primaries is simply out of the question.

The Ohira-Tanaka factions, which gave the post of the party secretary-general unwillingly to the anti-Ohira camp, are keen to reestablish their intraparty power base by means of a victory in the coming Upper House election and then securing reelection of Ohira as LDP leader in the next presidential primaries.

Encouraged by the prospects that Fukuda is unlikely to run in the next LDP presidential race, the two leadership factions have already been staging recruitment campaigns for supporters.

Indications are that the next party presidential election, if held as scheduled, would be fought between Ohira, Yasuhiro Nakasone and Toshio Komoto, which would be almost certain to end in an easy victory of Ohira.

With the aim of ironing out the differences between the leadership and non-leadership factions, talks were held this Thursday between Ohira and representatives of the nonleadership factions, Ryutaro Nemoto, and Hajime Fukuda with no factional affiliation.

In order to hold the presidential primaries as scheduled, Ohira has to settle the matter in a couple of weeks, because the deadline to enlist new party members eligible for the primaries is December 20.

A majority of general LDP members reportedly favor holding the presidential primaries as scheduled, while the nonleadership faction led by Takeo Miki seems rather negative in siding with Fukuda's demand to freeze the primaries.

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Although Ohira appears to be in an advantageous position on this issue, the premier seems worried about the reaction from the Fukuda faction and other anti-Ohira factions should he reject their demand to freeze the presidential primaries.

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'YOMIURI' COMMENTS ON INAUGURATION OF 'WISEMEN'S GROUP'

Developing Sound Economic Ties

OW201015 Tokyo THE DAILY YOMIURI in English 17 Nov 79 p 2 OW

[Editorial: "The Wisemen"]

[Text] The "wisemen's group," a Japan-U.S. consultative body on bilateral economic matters, has finally come into existence.

Creation of the group was decided at the Washington summit in May when Prime Minister Ohira called on President Carter.

Their joint statement said that the group, made up of a small number of noted persons from the private sector, would be organized with a view to having it propose proper steps to maintain sound bilateral economic ties to the Japanese premier and the U.S. President.

The once imbalanced bilateral economic relations have been improved further since the Washington summit.

Japan's balance of current accounts has turned into deficit and the imbalanced trade surplus has been dwindling as a result of increased U.S. exports to Japan.

Nevertheless, the current improved situation is a transitory one and the fundamental causes producing the economic friction have hardly been corrected.

The main cause of the economic friction is a difference of international competition between the products of the two countries.

Fair Competition

Compared with this factor, the problems of Japan's restricted market, export-oriented economic structure and illogical reaction from the U.S. Congress are peripheral ones.

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Japan has increased labor productivity to a large extent while that in the U.S. is lingering.

It is glad news that reflection and recognition of this fact is spreading in the U.S.

It seems certain that competition in development of advanced technology will become severe between the two countries in the 1980's.

We can understand the apprehension of the U.S. but it will be impossible to construct bilateral sound economic relations if the U.S. rejects the technological competition. In this sense the problem is how to compete fairly. We hope the wisemen's group will show a satisfactory guideline in relation to this issue.

Another important matter to be tackled by this group is the problem of a bilateral cooperation which is represented by the alternative energy source development.

The current depreciation of the yen may threaten to cause friction as a result of expected increase in export of certain goods from Japan. But such a problem can and should be solved through private sector-level negotiations. The wisemen's group should tackle more important problems from a far and wider range of viewpoint.

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Tasks for Japan-U.S. 'Wisemen's' Panel

OW210429 Tokyo THE JAPAN TIMES in English 20 Nov 79 p 12 OW

[Editorial: "Tasks for Japan, U.S. 'Wisemen'"]

[Text] A Japan-U.S. panel made up of both prominent business leaders and former public officials with a distinguished record of service has now been formed to advise the two governments about managing the economic relations between the two largest industrial democracies into the 1980's. Prime Minister Masayoshi Ohira and U.S. President Jimmy Carter agreed on the desirability of securing the services of such a group when they met as early as in May.

The committee ought to have started functioning much earlier. In spite of the delay, the group's coming into being is to be welcomed. It is an indication that at least some people in the private industries and governments of the two countries realize the Japan-U.S. economic relations are in need of constant care and, better still, some more planning.

As far as the bilateral economic ties are concerned, the once acute tension is gone now and relative quiet has returned to the Japan-U.S. trade scene. But the need for conscious efforts to keep their economic exchanges on a stable footing is shown, for one, by the persistence of a sizable trade deficit on the U.S. part.

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In January-September this year, the U.S. ran a deficit of \$6.6 billion in trade with Japan, making it probable to incur a trade imbalance of about \$8 billion for the whole of 1979. This is a major improvement from last year's \$11.6 billion trade gap. The delayed effect of sharp rises in the yen rate in 1977-1978, the cyclical expansion of Japanese imports and the large increases in oil prices have combined to nearly eliminate Japan's global trade surplus.

It is true nonetheless that a bilateral trade deficit in the order of \$6 billion to \$8 billion in one unlikely to be accepted by any country for too long and with ease. The impact of the Japanese export surplus is felt more strongly in some industrial sectors than in others.

In the field of automobile trade, for example, alarm was voiced over the continuing expansion of Japanese car sales in the U.S. by U.S. Congressmen, management and labor leaders. Exports of Japanese-made automobiles topped the one-million mark for the first time for a half-year period this year (April to September).

U.S. automobile industry leaders point to the lopsided balance in the Japan-U.S. automobile trade--with Japanese car sales in the U.S. reaching some \$8 billion a year compared with \$200 million in sales in the Japanese market for U.S. car makers. U.S. automobile labor union leaders more boldly ask for relief against the rising imports of Japanese-made cars, even raising the possibility of a boycott.

Despite the demonstrated Japanese vulnerability in the oil and energy field, Japan's private industry still remains strongly competitive vis-a-vis that of the U.S. How to contain inflation and the superhigh rate of interest seem to be the two main preoccupations of economic policy in the U.S. at present. The unprecedentedly large spread in the U.S. and Japanese rates of interest are something that was unthinkable for most of the postwar period when money costs remained consistently higher here than in the U.S.

The rate of interest, like that of inflation, serves as a broad gauge of relative national economic strength. The historically high rate of interest in the U.S. is yet another indication of the diminished competing power of the U.S. economy.

Mr. Nobuhiko Ushiba, one of the four Japanese members of the advisory group rightly defined its assignment as one of identifying potential sources of Japan-U.S. economic conflict and recommending preventive measures against them to the two governments. There are a number of unresolved short-term problems between the U.S. and Japan, such as the extent of liberalization of procurement activities by Japanese Government agencies, the marketing of imported tobacco products, reciprocity in the treatment of Japanese and foreign banks.

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But the approach agreed upon in May by Messrs. Ohira and Carter is new and most significant in that the two leaders accepted the need for medium- and longer-term measures to place the future development of the two largest non-communist economies on a compatible course. These should be directed, among other things, at facilitating, rather than resisting, the change in the industrial structure, encouraging new investment to raise productivity and wiping out some remnants of "closed" Japanese institutions and practices.

And ultimately, economic issues are inseparable from those of security as is best exemplified in the problem of energy. Limiting the outbreak of damaging Japan-U.S. economic clashes and helping the U.S. to regain economic health are as sensible an effort as is the Japanese policy of supporting, instead of undermining, the U.S. resolve to preserve the requisite strategic balance in this and other regions of the world.

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POLITICAL AND SOCIOLOGICAL

'AKAHATA' CRITICIZES UN RESOLUTION ON KAMPUCHEA

OW161005 Tokyo JPS in English 0905 GMT 16 Nov 79 OW

[Text] Tokyo, 16 Nov JPS--The November 16 issue of AKAHATA severely criticized the "Draft UN Resolution" on Cambodia, presented by the ASEAN countries. The paper said that ASEAN was "attempting to hinder the stabilization process in Cambodia, under the disguise of humanitarianism."

"It is clear," AKAHATA said, "that this draft resolution is aimed at 'protecting' the remnants of the Pol Pot clique."

On the issue of the so-called "immediate withdrawal of foreign troops from Cambodia," as stated in the draft the paper made it clear that Vietnam is aiding Cambodia with allout efforts by providing materials and personnel, in conformity with the arrangements made by the Vietnam-Cambodia treaty, thus helping Cambodia to overcome disastrous effects left by the former Cambodian regime of Pol Pot. It also said that ASEAN is thus trying to sabotage the reconstruction of Cambodia as well as Vietnam's aid for Cambodia."

Commenting on the proposal for an "international conference on Cambodia," stated in the draft, AKAHATA said that this is an international maneuver to forcibly set up a reactionary regime in Cambodia, by using Sihanouk and others.

The paper also said "It is quite possible that China, which has been declaring "further punishment of Vietnam," will strengthen its hostility toward and intervention in the Indochina countries, taking advantage of the ASEAN-proposed draft of a UN resolution."

AKAHATA strongly condemned the "ASEAN draft resolution" as it contains "very inhumane and unjust" proposals. It also condemned the Japanese Government, saying that its "responsibility is very great, in that it provided groundwork for this draft resolution in the form of a "(Foreign Minister) Sonoda Plan" and has actively undertaken maneuvering behind the scene in the United Nations."

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POLITICAL AND SOCIOLOGICAL

JAPANESE SURVEY: MAJORITY FRIENDLY TOWARD U.S., CHINA

OW260037 Tokyo THE JAPAN TIMES in English 24 Nov 79 p 2 OW

[Text] Seven out of every 10 Japanese feel friendly toward the United States and China, but almost the same percentage of people feel unfriendly toward the Soviet Union, according to a government opinion poll released Friday.

The survey taken early last August also showed that 41 percent of the respondents entertained friendly sentiments toward South Korea, Japan's geographically closest neighbor, while 47 percent felt otherwise.

The poll was conducted to sound the views of the general public on Japan's foreign relations, the prime minister's office explained. It covered a sample of 3,00 men and women aged 20 and over.

It showed that 58 percent of the respondents--72 percent of the males and 46 percent of the females--were interested in matters related to foreign countries.

Asked with what region of the world Japan should promote friendly relations, the respondents mentioned Asia, North America and the Near and Middle East in that order.

Countrywise, 78 percent felt friendly toward the United States. They cited Japan's close trade and security relations and U.S. democracy as major reasons for their friendly sentiments toward the U.S. Seventeen percent had no friendly sentiments toward it.

As many as 67 percent felt that the U.S. attached importance to its relations with Japan. But only 28 percent thought that the two countries were equals in bilateral relations, while 55 percent thought otherwise.

On the question of trade imbalance between the two countries, 23 percent thought the U.S. was responsible for its unfavorable trade balance.

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On Sino-Japanese relations, 71 percent felt friendly toward China, showing a sharp increase from the 46 percent in a similar survey conducted a year before.

As for Japan's relations with the Soviet Union, only 13 percent entertained friendly sentiments toward that country, while 77 percent did not feel friendly.

Asked to assess Japan-Soviet relations, 14 percent described them as good and 77 percent thought otherwise. The northern territory issue and the fishery problem were cited as major reasons for the low rating of Japan-Soviet relations.

On Japan's relations with developing countries, 41 percent of the respondents said Japan should step up its efforts to extend economic cooperation, while only 7 percent said it should be kept to the minimum or discontinued altogether.

They cited Japan's dependence on these countries for supplies of natural resources, humanitarian obligations and its contribution to world peace as reasons for their positive support for increased economic cooperation.

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POLITICAL AND SOCIOLOGICAL

JAPAN PLANS TO CONVERT IWO JIMA INTO MILITARY BASE

OW221037 Tokyo THE DAILY YOMIURI in English 20 Nov 79 p 1 OW

[Excerpt] The Defense Agency plans to convert Iwo Jima into a military base to safeguard a strategic route for the transport of U.S. forces and crude oil to Japan in case of emergency, it was reported Monday.

It has also decided to request an appropriate of 300 million yen in its budget for fiscal 1980 to carry out initial surveys for construction of numerous military installations there.

On completion of these installations, the agency plans to station about six antisubmarine reconnaissance planes plus an undisclosed number of the Air Self-Defense Force (ASDF) planes on the island.

Officials of the agency reportedly believe that the southeastern route between the island, about 1,200 kilometers south of Tokyo, and Japan, will be linked to an East-West cross-Pacific route that the U.S. is expected to maintain also in case of emergency.

This route, extending from San Diego, will be to support U.S. military aid to Far Eastern countries, and also to ensure oil shipments from the Middle East.

The Iwo Jima routes can be extended and linked to the cross-Pacific route as Saipan and Guam are also located on a line extending from Iwo Jima, the sources said.

At present, 60 members of the Maritime Self-Defense Force (MSDF) are stationed on Iwo Jima mostly to maintain a 2,600-meter runway and refuel military planes.

The Defense Agency presently plans to build military training installations in the initial several years.

The six antisubmarine patrol planes will consist of P3Cs, which will be used for antisubmarine exercises.

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On top of this, an undisclosed number of ASDF aircraft will be stationed on the island for night training flights, which often raise opposition from local residents in Japan because of noise.

They will also be mobilized for mock warfare employing electronic devices.

For these purposes, the agency plans to increase lodging facilities and rain-water tanks, and to build a pier for oil and other supplies, which can be reached despite the island's shoals.

In case of emergency, the island can be converted into an operational center, from where aircraft of the MSDF and ASDF can fly to Saipan, Guam and Hawaii for close joint Japanese-U.S. military operations, the officials envisage.

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ECONOMIC

OKITA: ASEAN SHOULD NOT FEAR JAPANESE AID TO CHINA

OW261355 Tokyo MAINICHI DAILY NEWS in English 25 Nov 79 p 5 OW

[Text] Foreign Minister Saburo Okita has emphasized that Japan is sure to refrain from launching an export-offensive to China in return for big-scale Japanese yen-loans to Beijing, saying "It is not necessary for Asian countries to worry about this."

The minister, who will host the first Japan-ASEAN (Association of South-east Asian Nations) economic ministers conference to be held in Tokyo Monday and Tuesday made these and other remarks in an exclusive interview with the MAINICHI.

Okita is scheduled to visit China 5 December accompanying Prime Minister Masayoshi Ohira.

Excerpt of the interview is as follows:

Question: What kind of aid do you plan to extend to ASEAN member countries for strengthening ties between Japan and the organization?

Answer: First, the government is planning to extend help in the field of food production in the region to make sure the food supply is adequate. Second, aid to help establish an economy-related infrastructure, including roads, ports, agricultural irrigation and telecommunications. Third, aid to their program to develop energy resources, including coal and natural gas.

Question: The leaders of ASEAN countries are worried about the Japan-China economic grouping. They fear that if China grows in the field of industry, Chinese-made merchandise might hurt the enthusiasm of ASEAN to industrialize?

Answer: As the purpose of the yen-loan to China is especially for establishing infrastructure in China, it is not necessary to worry about it. On the

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contrary, ASEAN countries will be able to buy cheap coal produced in China, which would ease the shortage of energy in the ASEAN region, and if Chinese per capita income increases modernization programs, ASEAN will be able to export tropical produce to China. Moreover, political stabilization in China will surely contribute to peace.

Question: Three years ago, the government announced that it would double the amount of aid to developing countries in three years. How do you intend to extend aid after finishing the period?

Answer: From 1981 on, the government will double the amount of aid in five years. Although the government hopes to increase the percentage of the total Official Development Assistance (ODA) to gross national product to 0.31-0.32 percent--the average of OECD (Organization for Economic Cooperation and Development) member countries--aid from Japan this fiscal year will be as little as 0.26 percent of GNP.

Question: Do you think that the expanding gap between the poor and the rich in the Philippines and Indonesia are major reasons for the unrest in those countries?

Answer: It is true that in some ASEAN countries, there are crucial problems such as rising unemployment, the gap growing between rich and poor, like the situation in South Korea at the time of President Pak's assassination. But the problems are easy to solve by taxation and other economic measures.

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ECONOMIC

JAPAN'S DOLLAR LOANS TO OTHER COUNTRIES FALLING SHARPLY

OW261421 Tokyo MAINICHI DAILY NEWS in English 24 Nov 79 p 5 OW

[Text] Dollar loans to foreign countries by Japanese banks in the form of the international syndicate have been shrinking sharply in contrast to the favorable expansion until the beginning of this year, due to the rigid guidance of the Finance Ministry which feels great anxiety about the prospects for so-called "oil money."

Japanese banks usually set US dollar loans in cooperation with two or three foreign banks by using the so-called "Eurodollar" as the capital, mainly consisting of oil money flowing in from oil-producing countries to European money markets.

According to the ministry, the total amount of medium-, long-term dollar loans by Japanese banks increased from \$8.54 billion in September 1977 to \$25.7 billion in the same month two years later.

An economic observer noted that Japanese banks had to find new borrowers in foreign countries especially in the low economic growth period of 1977-1979, because there was less demand for loans from Japanese enterprises during which the business has been overshadowed by the following problems;

- 1) The default risk on repayment of loans grew under the circumstances of expanding deficit in the international payments balance of developing countries, which was triggered by sharp markups in crude oil prices. The countries to which Japanese banks extended dollar loans centered excessively on Southeast Asian countries, including Indonesia and Thailand and Latin American countries, including Mexico and Brazil.
- 2) No one can predict the behavior of oil money in the event that oil-producing countries stop using the dollar as the key currency, but loans based on the dollar will inevitably suffer crucial damage.

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To make matters worse for the banks, the profit produced by loans continued shrinking since early this year, mainly due to tough competition among the banking giants in industrialized nations.

Banks used to charge interest at the rate of Eurodollar's interest rate plus 1.5 percent, but in these months banks were able to add as little as 0.5 percent to the Eurodollar rate, a spokesman for a Japanese bank said.

With these facts in mind, the Finance Ministry laid down a set of guidelines this summer, some of which have already been put into effect: 1) The ratio of loan by a Japanese bank to total amount should be within one-fourth in case a Japanese bank participates in a dollar-loan. 2) A Japanese bank must establish the ceiling amount of loan to one specific country on a basis of the bank's capital to avoid the excessive concentration.

Many financial observers predicted that total dollar loans by Japanese banks next year will drop to a level of 20-30 percent of this year.

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ECONOMIC

'MAINICHI' COMMENTS ON U.S. BAN ON IRANIAN OIL IMPORTS

OW161659 Tokyo MAINICHI DAILY NEWS in English 15 Nov 79 p 2 OW

[Editorial: "U.S. Cutoff of Iranian Oil Imports"]

[Text] U.S.-Iranian relations became more tense with President Carter's announcement Monday of a total halt in American purchases of Iranian oil. Relations between the two countries have been deteriorating rapidly since Islamic student militants, demanding the deposed shah's extradition from the U.S., seized the U.S. Embassy in Tehran and took more than 60 Americans hostage. If the U.S.-Iranian confrontation worsens, it could lead to grave consequences for both countries.

We urge the two nations to show prudence and restraint in this respect and, at the same time, we hope influential international organizations such as the UN will render their good offices in mediating the situation--immediately and in a positive manner.

Also, we hope third countries, supporting such mediation efforts, will refrain from seizing the opportunity to instigate in any way the parties concerned, in order to prevent the situation from worsening.

Frankly speaking, prospects for a negotiated settlement of the U.S.-Iranian political impasse seem dim, despite mediation efforts by the pope and the Palestine Liberation Organization (which is on intimate terms with the Iranian leader, the Ayatollah Ruhollah Khomeyni). The UN Security Council, as well, by a unanimous vote, called for the release of the U.S. Embassy hostages.

The seizure of an embassy--which is under the protection of international law--and holding embassy staff members hostage cannot be accepted or permitted. President Carter's decision Monday to stop all oil purchases from Iran may have been prompted by his intention to win an Iranian compromise by putting brakes on Iran's oil exports, upon which Iran's economy depends.

From the Iranian point of view, however, America's refusal to comply with its demand for the deposed shah's extradition cannot be accepted. Also

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intolerable to the Iranians is the diplomatic policy Washington pursued in the past--a policy designed to strengthen Shah Pahlavi's regime through direct and indirect support after the shah took power in the early 1950's.

It is natural the Iranian's hatred of the shah, demonstrated in the violent Iranian revolution, is now directed at the U.S. which protects and harbors him.

The American practice of accepting political refugees and other displaced persons should be hailed as a good tradition, nurtured by American democracy. Washington's rejection of repeated Iranian demands for the delivery of the shah to Iran is true to that tradition.

However, it appears the degree of hatred for the shah, shown in the Iranian revolution, is incomprehensible to Americans. And is it an overstatement to say the Carter Administration's failure to grasp the true feelings of the Iranian people, as demonstrated in the revolution, has done much to increase anti-American sentiment in that country?

On the other side of the coin, American outrage toward Iranians has been mounting as the U.S. Embassy hostages continue to be held.

President Carter might resort to the use of military force in an attempt to bring about a quick solution of the problem, despite his statements to the contrary. He might consider it necessary to take such action to alleviate Americans' dissatisfaction and displeasure at their nation's declining dignity internationally and in the face of his dwindling popularity at home, with the presidential election approaching.

However, such a step would pose a serious threat to world peace, would damage America's reputation and, above all, would bring tragedy to Iran.

In line with new international developments, Japan must prepare itself to cope with any consequences that may arise, as there is no doubt the oil supply situation has become increasingly uncertain due to the intensified U.S.-Iranian confrontation.

Domestically, it is time for the Japanese people to redouble their efforts to conserve oil.

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ECONOMIC

JAPAN ENGINEERS' SERVICE ASKED FOR PRC OVERSEAS PROJECTS

OW250112 Tokyo THE JAPAN TIMES in English 23 Nov 79 p 5 OW

[Text] China has sought the services of Japanese engineers in overseas projects involving Chinese labor at the semiannual trade fair at Guangzhou (Canton), according to major Japanese participants Thursday.

Toshio Oshikawa, managing director of the Association for the Promotion of International Trade (Kokubosoku), said that such a tieup was sought by Tianjin Municipal Committee for Economic and Technical Relations With Foreign Countries. A similar committee exists in Guangzhou.

The Tianjin committee was in charge of sending thousands of Chinese workers to Tanzania for that country's economic development, Oshikawa told a news conference at the Japan External Trade Organization (JETRO).

Oshikawa, who attended the Chinese export commodities fair that closed 15 November after a month-long run, also said that China is now conducting trade talks and seeking joint ventures not only through central organizations but also through municipal and provincial bodies.

He said statistics are not available for the fair since China has not officially made such an announcement but the fair was apparently affected by China's economic readjustment policy.

Oshikawa said that average price of industrial products and wages rose 28 percent and 40 percent, respectively, in China, resulting in comparatively high export prices and difficulties for Japan to import Chinese commodities due to the depreciation of the yen.

He said that the Japanese did not conclude any deals for soybeans due to poor crops in China but deals increased for Chinese herb medicine, furs and carpets, as well as Chinese petrochemical products.

Likewise, there were no major deals for Chinese textiles and machinery but there were some for Chinese machine tools and motorcycles.

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Imports of Chinese mineral products like coal and fire-resistant materials increased, and China has a demand for small passenger aircraft and planes for crop-dusting which were exhibited at the fair, he said.

Japanese trucks were sold but no major export deals were made for steel products and specialty steels, he said.

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ECONOMIC

'SANKEI': JAPAN SHIPS 'STRATEGIC MATERIAL' TO NORTH KOREA

OW281858 Tokyo SANKEI SHIMBUN in Japanese 25 Nov 79 Morning Edition p 1 OW

[Article by Reporter Akihiko Ushiba]

[Text] According to disclosures by informed sources on 24 November, a huge quantity of strategic materials has been exported to North Korea (DPRK), which has lately been beefing up its armament. The strategic materials included small highspeed boats, radar, military radio sets and other items that are virtually "weapons." The shipments will certainly develop into a big issue, since Japan adheres to a "three-point principle of banning arms exports" and also because the coordinating committee for export to communist areas prohibits the export of strategic materials to the communist sphere. The shipments are also likely to create a diplomatic stir, because South Korea, North Korea's strong rival, is certain to strongly protest them.

Japan's exports to North Korea amounted to 73.5 billion yen in 1974, a record high, but dwindled to 28.5 billion yen in 1975 as a result of a deterioration in North Korea's foreign exchange situation. However, exports started to rise again 2 years ago and recovered to 37.9 billion yen in 1978.

According to 1978 records, major items North Korea imported from Japan were nonferrous metals and their products worth 6 billion yen, chemical products worth 5.9 billion yen, machinery worth 5.4 billion yen and electric appliances worth 4.6 billion yen (based on a survey by the Japan Trade Promotion Association).

What matters is the fact that a considerable quantity of materials expected to be used for military purposes were included in the items exported. Looking at export records for the past 5 years, as many as 160 sets of high-performance communications equipment which are not needed in civilian sectors, were exported in 1975. In 1976 when exports declined, 75 radar sets and 80 sets of high-performance communications equipment were exported. In addition, some 2,000 heavy trucks, about 150 small boats, electric locomotives, cables and rail have been exported each year.

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Although ostensibly these materials may be claimed for use in civilian sectors, there virtually is no distinction between military and civilian sectors in a communist country. Therefore, it will be no mistake to believe that the materials exported from Japan are helping North Korea's military buildup.

The export of these strategic materials sharply increased this year. The export of small highspeed boats amounted to 500 million yen, or about 10 times that of last year, and the delivery of 70 sets of portable military communications equipment and 2,500 dumptrucks and other heavy trucks has already been completed.

In addition to these items, North Korea wants to import some 20,000 truck engines and is currently negotiating with Japanese manufacturers and traders. Even military specialists are taking note of these truck engines because they are reportedly of high horsepower that can readily be fitted to armored vehicles.

South Korea, which continues to be antagonistic to North Korea, has so far shown no official response to the shipments. However, South Korea is expected to lodge a strong protest sooner or later. When a Japanese firm tried to export an acrylics plant to North Korea, the deal was canceled, as South Korea protested that the plant "might be linked to an improvement of military winter uniforms."

Especially since the shipments were reported at a time when the military situation on the Korean peninsula has become increasingly severe as a result of North Korea's marked military buildup and the announced U.S. freeze on its troop withdrawal plan, they may develop into a diplomatic issue, depending on a future ROK move, observers say.

Japan has no diplomatic relations with North Korea and trade between the two countries has been exclusively on a private basis, except for a yen 100 million worth insurance system. Regarding such exports of strategic goods to North Korea, some government officials, including those in defense areas, criticize them from the viewpoint of security, contending that "exports to aid North Korea in its military buildup is a virtually suicidal act." Other officials, however, say that "exports of strategic goods should be tolerated to some extent so as to break the taboo of an arms embargo, although they may involved some danger. Thus, it appears that the government is still unable to take a clearcut position over the issue.

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SCIENCE AND TECHNOLOGY

HIGH-STRENGTH, HIGH TEMPERATURE ALUMINUM COMPOSITE DEVELOPED

Tokyo NIKKAN KOGYO SHIMBUN in Japanese 4 Sep 79 p 5

[Text] As one aspect of fiber reinforced metal composite materials development, the Special Inorganic Materials Research Laboratory (president: Hajime Kofuji) has succeeded in developing an "aluminum composite material" containing silicon carbide (SiC) fiber whose tensile strength (maximum: 84 kilograms per square millimeter) surpasses super duralumin. This composite material has a bending strength of 105-110 kilograms per square millimeter at temperatures up to 400° Centigrade. Because of its lightness and strength is is regarded as suitable for aircraft as well as for other uses where high temperature resistance and strength are required. The industry will probably follow it closely as a structural material of the future.

Properties That Surpass Super Duralumin

The characteristics of FRM composed of SiC fiber and aluminum are as follows: tensile strength--62-84 kilograms per square millimeter; bending strength--105-110 kilograms per square millimeter; specific gravity--2.5-2.6; tensile elastic ratio--9-11 tons per square millimeter. The tensile strength of the mother material--aluminum--is 13 kilograms per square millimeter and elastic ratio, 8 tons per square millimeter. The proportion of SiC fiber in relation to the mother material is 35-40 percent and its size is 13 microns in diameter with tensile strength of 200 kilograms per square millimeter and its elastic ratio, 20 tons per square millimeter.

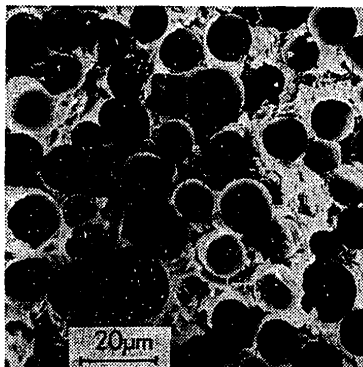
This SiC fiber's precursor material is dimethyldichlorosilane developed by the Tohoku University Metal Materials Research Laboratory. After chemical treatment, it is baked and rendered inorganic. At present, Nippon Carbon is in the process of commercializing it under the product name of "Nikaron."

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The special Inorganic Materials Research Laboratory developed a high strength, highly elastic aluminum composite material using this SiC fiber. As shown in the photo (broken section under scan electron microscope), the SiC fiber wets well in the composite without reacting with the aluminum matrix.

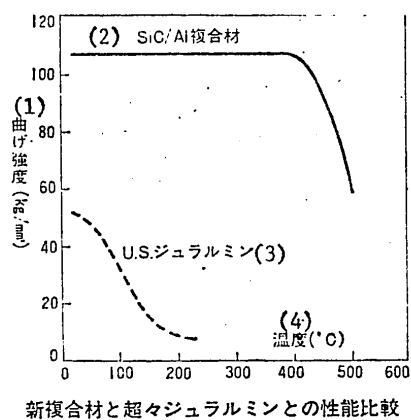
This FRM is considered to have wide and varied usage including aircraft central fuselage truss structure, rib braces, tail section, section around the engine, fan blades and so on. As it does not change at all in a high temperature oxidized environment, it can also be employed in boiler flue gas scrubbers, in automobile exhaust gas scrubbers, in chemical plants, as a heat resistant curtain, in centrifuge bodies for centrifugal uranium enrichment and so forth.



SiC - A 1 Composite material's broken section seen under electron scanning microscope

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Figure: Comparison of New Composite Material and Super Duralumin as to Their Respective Capabilities



Key

1. Bending strength (kg/mm<sup>2</sup>)
2. SiC composite material
3. U.S. duralumin
4. Temperature

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SCIENCE AND TECHNOLOGY

AMORPHOUS STEEL SHEET DEVELOPMENT TO START IN JFY 1980

Tokyo NIHON KOGYO SHIMBUN in Japanese 20 Sep 79 p 1

[Text] The New Technology Development Corporation (president: Yoshimitsu Takeyasu) has decided to start development of energy-saving power transformer electrical steel sheets using the so-called "dream alloy"--amorphous metal--in JFY 1980 and it has just compiled a concrete development plan. According to the plan, the amorphous technology developed by Tohoku University's Professor Ken Masumoto will be the base. The plan calls for a mass production steel sheet plant capable of 50 tons a month production to be developed within 3 years. The development will be consigned to steel companies, heavy electric equipment manufacturers and electric power companies. The corporation is asking for 3 billion yen as commission development budget for the coming JFY.

Amorphous electric steel sheet is easier to manufacture than the silicon steel sheet currently in use. Moreover, its use would reduce electrical power loss by a large margin. The corporation's estimate is that a total change-over to amorphous steel sheets would lead to savings of about 2.75 million kiloliters (petroleum equivalent) of energy per year. For this reason, further energy conservation appears to be a possibility as a result of initiating the practical application research on amorphous electric steel sheets.

Amorphous electric steel sheets will be manufactured from iron, ferroboration, carbon and so on. Continuous production of thin amorphous strip, following the diagrammed mass production flow chart is anticipated. After melting the raw materials in a vacuum melting furnace (1100°C), the liquified material is expelled from a nozzle and coiled using a super high speed (5000 revolutions per minute) roll. The melted liquid coming out of the nozzle is cooled at super high speed 505°C per second and is at once formed into an amorphous alloy thin sheet of about 50 micron thickness. The speed of thin strip production is about 100 meters per second or nearly 1,000 times the speed of iron and steel rolling.

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At present, in order to manufacture silicon steel sheet, 10 processing steps--melting, casting, high temperature rolling and so forth--are required and each step involves complicated raising and lowering of temperatures. Amorphous steel sheet production, on the other hand, requires only four manufacturing steps before producing thin strip and its manufacture involves less energy. The production line energy conservation ratio is 1 liter of petroleum (equivalent) per 1 kilogram steel sheet. In the event of replacing all the current silicon steel sheet production steps with amorphous production procedures, the energy equivalent of 1.2 million kiloliters of petroleum will be saved each year.

As for the raw material itself, ferroboron, which is costlier than ferrosilicon currently in use, is used but electrical loss (iron loss) within the iron core will be 0.1 percent, compared to silicon steel sheet's 0.4 percent. In terms of 470 billion kilowatt total electrical power generation in Japan in 1975, the switch-over to the amorphous steel sheets would mean a saving of 1.45 million kiloliters petroleum equivalent, and the capacity of two large power plants, 1.3 million kilowatts, or in monetary terms, 400-500 billion yen in power plant construction cost.

The corporation will embark on a 3 year consigned-development plan starting in JFY 1980 with an 80 percent yield (40 percent in the case of silicon steel sheets) as one of its development objectives. To implement this plan, mass production of large (wide) sheets, laminated steel core formation, and field data collection must be implemented. Thus the corporation will inject an "unprecedented" 3 billion yen and commission five to six firms--steel manufacturers, heavy electric equipment makers manufacturing transformers, and user firm electric power companies--will be commissioned to undertake the practical application research.

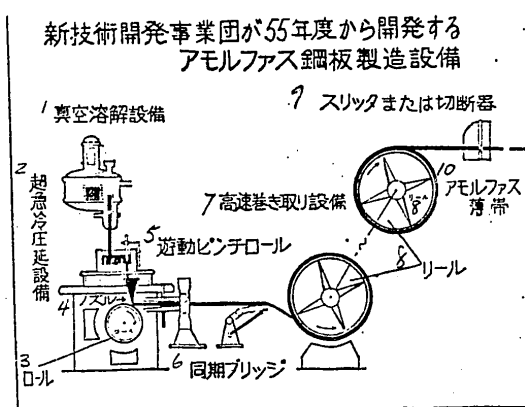
This development project will be implemented as one part of the Science and Technology Agency's Materials Research and Development Project.

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Diagram: Amorphous Steel Sheet Production Facility That the New Technology Development Association Is Going to Develop Starting in JFY 1980



Key

1. Vacuum melting facility
2. Super-rapid cooling roller
3. Roll
4. Nozzle
5. Floating pinch roller
6. Synchronous bridge
7. High-speed coiling equipment
8. Reel
9. Slitter or cutter
10. Amorphous thin strip

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SCIENCE AND TECHNOLOGY

PLANT FOR SATELLITES-USE CFRP COMPOSITES STARTED

Tokyo NIKKEI SANGYO SHIMBUN in Japanese 26 Oct 79 p 6

[Text] On 25 October, Mitsubishi Electric Corporation announced that they have completed a plant for space machine and instrument-use composites, the first of its kind in Japan, within the grounds of the Sagami Workshop of the said company (Sagamihara-shi, Kanagawa-ken), and they will operate the plant on a full scale starting from the 29th. The new plant is equipped with a large size autoclave (photo) which works the materials consisting mainly of CFRP (carbon fiber reinforced plastics) at high pressure and temperature, and specializes in manufacture of structural materials for artificial satellites proper and satellite radar.

Contents the company, "With the completion of the new plant, we have finally established an integrated satellite production system from the molding of the materials to the loaded electronic machines and instruments." They also disclosed that their plant would sell composite manufactured products to other satellite makers.

The plant for composites is a steel-framed one-story building measures 620m<sup>2</sup> in floor area. It has been under construction since November last year at a total construction cost of approximately 700 million yen. The interior is divided into the molding workshop and the processing workshop.

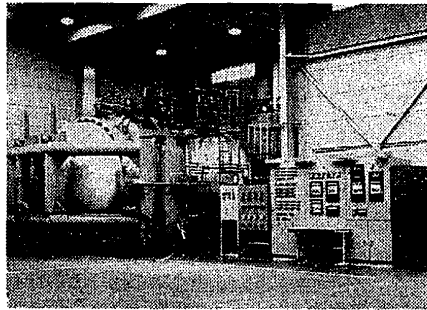
In the "molding" area, lamination/adhesion and inspection of composites are conducted under a clean environment where temperature, humidity and dust are controlled. In the "processing" area, composite structures are hardened and molded in an autoclave measuring 4 meters in diameter and 5 meters in depth.

The products yielded are light and large satellite structural materials made of highly efficient composites consisting primarily of CFRP, and structural parts of solar cell panels, antennas used for communications satellites and satellite radar. The operation of the plant will be initiated by manufacturing panels to line on the solar cell incorporated in a 350kg class large domestic satellite, ETSW (Technical test satellite model IV) ordered from the National Space Development Agency.

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The Mitsubishi Electric Corporation affirms that this plant completes an efficient integrated system for the manufacture of various machines and instruments to be loaded, and plans to sell composite machine products to other satellite makers. Simultaneously, they revealed their intention to explore the possibility of accommodating the needs for aircraft materials and special light weight materials in the future. Also, a large satellite plant is scheduled to be completed within the grounds of Kamakura Workshop (Kamakura-shi, Kanagawa-ken) of the said company in the next month. All of these new developments greatly enhance the artificial satellite production capacity.



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SCIENCE AND TECHNOLOGY

NEW DESIGN FOR JOSEPHSON EFFECT ELEMENT DEVELOPED

Tokyo NIHON KOGYO SHIMBUN in Japanese 30 Oct 79 p 17

[Text] The Institute of Physical and Chemical Research (Director, Shinji Fukui) has developed a new manufacturing process for a Josephson effect element designated as the "nonuniform film thickness type micro-bridge design," using niobium as an ultra electro-conductive material. Hope is placed on the use of the Josephson effect element as a milli wave and micro wave detection element and a computer operation element. Especially with its use for computers, IBM of the U.S. announced their intention to manufacture a trial model Josephson effect elements computer by 1985 as a "prospective winner of the post super LSI era." At present, international competition in the development of elements is at the stage of being activated focusing on how to develop stable, long-lasting and mass-productive element devices intended for practical use. The invention developed by IPCR at this time relates to this device technology, which is characterized by excellent mass-productivity and durability. It is also expected to be highly integrated.

The Josephson effect element is composed of two pieces of ultra electro-conductive material, such as lead, tin, indium, niobium and vanadium, vacuum evaporated on a thin film base plate such as silicon dioxide, and it is structured in such a way as to have these two "base plates" connected in a micro-area of Angstrom size. This device is cooled with liquid helium to an extremely low temperature state. Changes in the voltage and current between the base plates are detected by means of the tunnel effect, etc.. In this manner, it can be utilized as an operation element. Owing to the use of the ultra electro-conductive phenomenon, the device is bestowed with a low power loss (exothermic reaction), a high sensitivity and a fast response rate of several pico seconds. It is expected that this device can improve the performance of existing semiconductive elements by 6-7 digits.

Several designs for the device have been proposed to date including a dot contact element which looks like sharpened pencils connecting on one base plate, a thin film tunnel element made of two sheets of rectangular thin films intersected in the shape of a cross and a micro-bridge element which connects two basic plates in a micro area. However, the present circumstance, which design shall be nominated as a prospective winner will be still left for discussion.

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Relating to materials, studies which used lead prevail. It is said that IBM, however, uses a lead alloy avoiding lead which is associated with durability problems, and is promoting studies on developing the tunnel element and a micro-bridge element.

As an international major trend, lead, tin and indium have been used as materials in the past. IPCR judged that these materials had service-life related problems and focused their attention to niobium. Niobium is vacuum evaporated by a vacuum sputtering device on a basic plate which is pre-treated to make it electron beam-proof by an electron beam exposer. Using the materials prepared as above, they have been working on creating a micro area of an Angstrom order, which is the hardest obstacle to the processing. Trial manufacture and evaluation of the niobium nonuniform film thickness micro-bridge element are currently being pursued. The device developed at this time, however, was produced without using the expensive electron beam exposer by a new manufacturing method which substituted a mask popularly used in IC production.

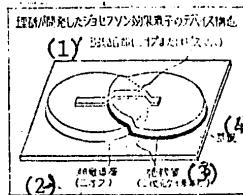
The developed method works as follows: A mask punctured with round or square microns in diameter is placed over a basic plate made of silicon dioxide, etc., and niobium is vacuum evaporated on the plate by a vacuum sputtering device. The operation of the sputtering device is discontinued when an adequate uniform niobium layer is formed. The mask is then little by little slid off the round niobium layer until it covers only a small portion of the niobium layer. Subsequently, an insulation layer (silicon dioxide, etc) is vacuum evaporated to a thickness as much as 1/several 10s of the thickness of the niobium layer. After the completion of this vacuum evaporation, niobium is vacuum evaporated by sputtering over the insulation layer without moving the position of the mask, so that it looks like round or square hot cakes slightly overlapping one another. Finally, a rectangular connection layer (semi-metal such as niobium or bismuth) is constructed on the cakes. (See drawing)

Bridge design connects two polarized base plates with a small bridge. In the regular method, the niobium base plate thickness and the thickness of the bridge are the same. However, the performance of the element will be improved if the thickness of the bridge is thinner than the base plates. Therefore, a method was proposed to thin the bridge layer by resisting the formation of the layer using an electron beam device. This method however required more time and labor posing a problem related to mass productivity, and in addition, 3,000 Angstroms was the limit of the thinning of the bridge film thickness.

With the newly invented method, this thickness of the bridge is determined by the thickness of the insulation layer. Only by controlling the thickness of this insulation layer, can the mask method achieve the considerably thinned bridge thickness of 500 Angstroms. With enough supply of round or square

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mask patterns made available, a single vacuum evaporation process can produce as many devices as desired. It is also said that the round shaped devices can be piled up as many as desired to produce a high voltage element which can be used as an interface element which connects a Josephson computer to an external terminal of a printer, etc..



Drawing: Device Structure of the Josephson Effect Element Developed by IPCR

Key: 1. weak-coupling (niobium or bismuth)  
 2. ultra electro-conductive layer (niobium)  
 3. insulation layer (silicon dioxide, etc.)  
 4. base plate

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SCIENCE AND TECHNOLOGY

MAJOR FIELD TEST OF SOLAR CELL PANELS TO START

Tokyo NIKKEI SANGYO SHIMBUN in Japanese 30 Oct 79 p 20

[Text] The Agency of Industrial Science and Technology of the Ministry of International Trade and Industry is planning to initiate a major field test of solar cell panels by installing them in private homes, collective housing, schools and factories for a period of a few years starting from 1980 as a link of the chain in the "Sunshine Program." In this project, they plan to use solar cells which output in total 400 and several tens of kilowatts expecting to find through the tests what kind of problems will develop when solar power generation is utilized as a supplier of general electric power. Also, it seems that the mass production by solar cells will soon gain momentum since this project brings new demands every year for the solar cells with the yearly output several times more than 20-30kw, a currently estimated production by solar cells.

According to the project, solar cell panels of 3kw, 60kw and 200kw sizes will be installed for private homes, collective housing and schools or factories respectively. In case of private homes where 2-3kw of electric power is generally used in Japan, a need for electric power shall be practically met by the solar cell alone during the summer months when the sun light is strong according to the project objective. The size of the solar cell panel required to supply this power is approximately from 30m<sup>2</sup> to 45m<sup>2</sup>. It is therefore estimated that the solar cell panel occupies the entire roof of a two-story private home.

Solar energy is associated with a special difficulty in that the energy yield fluctuates extremely by day and night and throughout the year. Therefore, the project will probe practical problems such as what kind of system will work better in using solar cells as a general power source. Also, since the Sunshine Program which was rushing to develop the various types of solar cells such as ribbon crystal type, thin film crystal type and compound semi-conductor type, has arrived at a technically practical stage in all types, various type solar cells being developed shall be tested in this project.

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Current solar cell cost is said to be 1000-10,000 yen/watt. This figure must be reduced by two digits if solar cells are to be utilized on a full scale. On the other hand, they say solar cell cost is about 10 dollars/watt in the U.S. The truth of the matter is that Japanese industry is handicapped by the aspect of price in the international business talks on solar cells. The price of the domestic solar cells is high, which is, for one, due to the small yearly output scale of 20-30kw, far below the mass production level. The project also watches for the promotion of the solar cell industry by increasing solar cell electrical output in a sweep by several times using the national budget.

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SCIENCE AND TECHNOLOGY

ORGANIC MATERIAL SOLAR CELLS BELIEVED PROMISING

Tokyo NIKKEI SANGYO SHINBUN in Japanese 30 Oct 79 p 20

[Text] "In the future, it may be possible to make a solar cell by a simple operation such as painting an organic material with a brush." In the Research Institute for Polymers and Textiles which recently manufactured a trial solar cell using an organic material called merocyanine coloring matter, director Okada tells something very surprising to those research workers who have been engaged in the development of solar cells using conventional inorganic materials.

The solar cells currently utilized require single crystals from silicon materials treated in a furnace at a temperature above 1000°C. Even the amorphous (non-crystalline substance) semi-conductor type solar cells which are considered greatly promising as a prospective winner for future solar cell construction, require a temperature over 200°C during the vacuum evaporation process. "Well, for that matter, the new solar cells with organic materials are presently manufactured using the same vacuum evaporation technology as amorphous cells. However, organic materials can be synthesized without difficulties from oil and coal, and they pose no environmental pollution problems since they are originated from life," he advertised the importance of the research results.

RIPT moved into Tsukuba Research and School Community in Ibaraki-ken leaving Yokohama where the institute marked the history of operating for 60 years starting as an experimental station of the silk industry. Subjects of research are no longer limited to textiles but have expanded extensively to cover general organic materials, changing the image of the place totally compared to the past. Great hope is placed upon the future achievements of the newly developed Tsukuba research and school community. It is likely that director Okada and his subordinates are contemplating tackling new energy related technology having a good command of organic materials in the said new world.

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For the time being, the merocyanine solar cells yields a 3 percent photo-electron conversion efficiency, which is practically the same as the efficiency of the amorphous solar cells. This is the first time in the world that solar cells which use organic materials achieved a 3 percent efficiency.

Director Okada challenges further, "From now on, we will try to embark on the development of services, for example, as a sensor at the input of a data processor. In concert with this effort, we also hope to upgrade its efficiency. According to my personal assessment, it is not a dream to increase the efficiency to 10-40 percent if guided by the structure of bio-films with a good photoelectron conversion efficiency."

#### Profile

Graduated from Tokyo Institute of Technology in 1950. Immediately after the graduation, employed by the Experimental Institute of Textile Industry which was the forerunner of the RIPT. Has been engaged in research on making polymer synthetic textiles and artificial organs. Took office as director since April, 1979. Born in Hiroshima. 52 years of age.

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SCIENCE AND TECHNOLOGY

AUTO PATENT, UTILITY MODEL APPLICATIONS SOARING

Tokyo NIKKEI SANGYO SHIMBUN in Japanese 8 Sep 79 p 1

[Text] The number of patent and utility model applications submitted by auto manufacturers has increased. The number of patent applications submitted by the six auto manufacturers during the period January to June this year is a 3 percent increase over that submitted during the same period last year or a slight increase of 1,453 applications, but the number of utility model applications as compared with that submitted last year increased by 36 percent to a total of 3,571 applications. Applications for utility models by Toyoto Motors Corporation and for both patents and utility models by Nissan Motors Co., Ltd. have soared. With a "world war of small cars" imminent, it is apparent that Japan's auto manufacturers are continually intensifying their research and development programs, and to protect their business interests in their technology, they have awakened to the realization of the tremendous importance of patents and utility models. These activities portend the surfacing of disputes on industrial property rights involving European and American manufacturers with Japan's automotive industry.

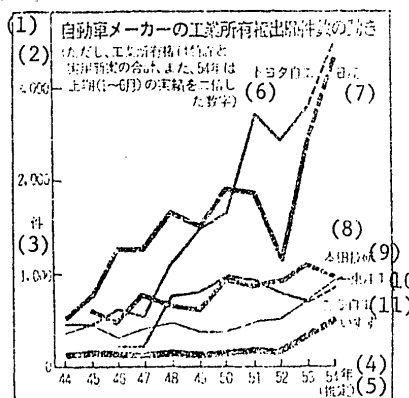
General Motors of the United States began marketing their small car, "the X car," this spring. The plant and equipment investment for this model, including development costs, was \$2.7 billion. The company has programmed further plant and equipment investments of \$4.5 billion this year and \$5 billion next year, and it plans to spend the bulk of the investments on small car development. Ford and Chrysler, too, are seriously involved in small car development and reportedly the number of patent applications by America's Big Three has spiraled.

In stride with this activity in the United States, the number of patent and utility model applications in the Japanese automotive world has increased, but conspicuously above the others in number are Toyota Motors and Nissan Motors. Occupying the one-two spots in the Japanese manufacturer ranking, these two firms not only compete fiercely in the market but they compete equally hard in the technological development battle.

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In particular, Nissan Motors which had submitted 500 patent applications in 1977 submitted more than 1,000 patent applications last year. During the first half of this year (January to June), its submission of 690 patent applications far outdistanced the 430 applications submitted by rival Toyota Motors. However, with its utility model applications being much smaller than that of Toyota, Nissan is slightly behind Toyota in total number of patent and utility model applications submitted. "In the field of manufacturing technology which we had hitherto neglected, we hope to submit patent and utility model applications in rapid succession," said Nissan director Yoshiichi Kaneo with a determination to overtake [Toyota].



- Key:
- (1) Industrial Property Rights Applications by Auto Manufacturers
  - (2) Industrial Property Rights refer to total of patents and utility models; also 1979 figure is double the actual number applied for during first half of year (January to June)
  - (3) Number of applications
  - (4) Year [44 = 1969, 54 = 1979]
  - (5) Estimated
  - (6) Toyota Motors
  - (7) Nissan Motors
  - (8) Honda Motors
  - (9) Toyo Kogyo
  - (10) Mitsubishi Motors
  - (11) Isuzu Motors

On the other hand, Toyota Motors' vice president Shigenobu Yamamoto's statement that "technological developments are now centered on the small car, thus creating a new state of affairs" leads one to believe that Toyoto will step up its research and development programs. Compared to the annual base over the past 10 years, the number of patent applications submitted has increased 3.5-fold and the number of utility models submitted 10-fold. For the first half of this year, the total number of patents and utility models submitted was 1,740 or roughly a 25 percent increase over that of last year during the same period. The company's capital investment program lists

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"research on new technology" and "development of new products" as top priorities and therefore for some time to come the company will continue its "patent offensive."

As for the others, attention is drawn to the increase in applications by Toyo Kogyo, Mitsubishi Motors and Isuzu Motors, which are tied in with the Big Three companies of Ford, Chrysler and General Motors, respectively. "There is much that we can learn about technological strategies from our American counterpart," said Isuzu vice president Yozo Shimizu and, with respect to patent management, the company has made great strides in progress over the past few years. In particular, Isuzu Motors and Toyo Kogyo appear to be increasing their joint research technology with their American partners and starting 2 years ago, there has been a noticeable increase in their number of applications in Japan.

Amidst all this, the number of applications submitted by Honda Motors for the first half of this year decreased slightly. But this was because research and development on its popular car "Civic" had been concluded. Starting this summer a heavy increase in number of applications concerning the technology related to the FF car (front engine and front wheel drive) is anticipated, and this is not reflected in the tabulation.

In Japan's automotive industry, starting around 1975, there was a tremendous increase in number of applications for such property rights as patents and utility models concerning measures for emissions control. But with completion of the emissions control measures in 1977, the number of applications dropped temporarily. As a result of the small car development competition on an international scale since last year, the number of applications for property rights has once again begun to increase markedly. Auto manufacturers are exerting their total effort in research on an FF car as part of the goal for a light-weight small car, but many applications have been submitted for patents and utility models on new technology which at a glance, from the standpoint of company defense, appear useless. For this reason, the viewpoint that the number of submissions for property rights by the various companies will continue for a while to increase has become predominant in the business world.

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SCIENCE AND TECHNOLOGY

MITSUBISHI MOTORS PREPARING TO PRODUCE DIESEL CAR

Tokyo NIKKAN KOGYO SHIMBUN in Japanese 11 Sep 79 p 9

[Text] Mitsubishi Motors Corporation (president: Yoshitoshi Sone) has reportedly firmed up its decision to market a diesel car by mid-1980. Already the company has invested the sum of 1.3 billion yen, installing machinery and equipment at the Kyoto plant to manufacture cylinder heads, camshafts, etc. for diesel engines and newly installing an engine production assembly line for diesel cars utilizing existing machinery and equipment. The company considers the diesel car "comparable to the gasoline car with respect to noise and vibration" and the company hopes to increase its share of the market by adding a diesel car with good fuel efficiency. The company is considering announcing a turbocharger attachment when it markets the diesel car and is presently stepping up its test manufacture program.

At present the five diesel cars are Crown of Toyota Motors, Cedric, Gloria and Laurel of Nissan Motors and Florian of Isuzu Motors. The domestic sales of diesel cars for all of last year was 44,324 cars or 67.7 percent more than that of the previous year. Until recently this upward trend has been a continuing one. This trend is attributable, not only to availability of Nissan's Laurel with a diesel engine, but also to the shift to diesel arising from the prevailing mood to "conserve resources"; and sales during the period January to August reached a total of 41,977 cars or a large increase of 54.8 percent when compared with the number sold during the same period for the previous year.

As for the recent trend in demand for diesel cars, with the surfacing of the light oil shortage problem, the five aforementioned diesel cars, including the Cedric, which are sold on the market, had occupied 23 percent of total sales, but sales in August dropped to 11.5 percent.

However, besides Toyota adding a Mark II diesel in September, very shortly Isuzu will market their Gemini diesel car, and as early as next spring Nissan and Toyo Kogyo are reportedly planning to market diesel cars. Despite the light oil shortage situation, the trend is for an annual increase in diesel car purchases.

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Mitsubishi Motors Corporation last year had generally completed its development of a diesel car engine. However, the occurrence of such problems as the lowering of horsepower when controlling car noise during the development phase necessitated making changes. But having achieved proper adjustment of car noise, vibration and horsepower, and having perfected an engine not inferior to that of the Volkswagen Golf diesel car, the company newly established a diesel engine production line at the Kyoto plant, in readiness of full scale production.

- The company has not released details on their diesel car, but their admission that [the diesel engine] "will be mounted on the Galant Sigma "is interpreted to indicate a displacement in the 2,000 cc class and there is a strong expectation that the plant will have an initial monthly production of approximately 1,000 cars.

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